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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,249	12/20/2001	Gregory D. May	7000-209	9021
27820	7590	02/23/2006	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			WANG, QUAN ZHEN	
P.O. BOX 1287			ART UNIT	PAPER NUMBER
CARY, NC 27512			2633	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,249

Applicant(s)

MAY ET AL.

Examiner

Quan-Zhen Wang

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,10-12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,10-12 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is a response to amendment filed on February 13, 2006. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

- a. Application number (checked for accuracy, including series code and serial number).
- b. Group art unit number (copied from most recent Office communication).
- c. Filing date.
- d. Name of the examiner who prepared the most recent Office action.
- e. Title of invention.
- f. Confirmation number (See MPEP §503).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7, 10, 12, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. (U.S. Patent US 5,986,782).

Regarding claim 1, Alexander teaches an method (fig. 2) of measuring optical signal power in an optical signal, comprising: receiving optical signals at a wavelength select switch (fig. 2, wavelength select device 54); coupling a received optical signal through the wavelength select switch to a power meter (fig. 2, power meter 56); measuring a power level of the optical signal passed through the wavelength select switch using the power meter; passing a subset of the optical signals through the wavelength select switch at substantially the same time; measuring power in the subset of optical signals using the power meter (column 4, lines 22-60). The system of Alexander differs from the claimed invention in that Alexander does not specifically teach displaying an indication of the optical signal power in the optical signal on a monitor to a system administrator. However, Alexander further teaches a local alarm indicator (fig. 2, local alarm 59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a monitor in the local alarm indicator to display an indication of the optical signal power in order to provide an alarm signal to indicate the status of the system.

Regarding claim 12, Alexander teaches an apparatus (fig. 2) for measuring optical signal power in an optical system (fig. 1), comprising: a wavelength selective switch (fig. 2, wavelength selective device 54) having output ports (fig. 2, output from 54) to selectively pass a received optical signal (fig. 2, signal input from 52) to one of the output ports wherein the wavelength select switch passes a subset of the optical signals to the one of the output ports at the same time and a power meter (fig. 2, power meter 56) measures power in the subset of the optical signals; and the power meter

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which receives an optical signal from an output port and measures the power in the optical signal (column 3, lines 55-67 and column 4, lines 1-60). The system of Alexander differs from the claimed invention in that Alexander does not specifically teach displaying an indication of the optical signal power in the optical signal on a monitor to a system administrator. However, Alexander further teaches a local alarm indicator (fig. 2, local alarm 59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a monitor in the local alarm indicator to display an indication of the optical signal power in order to provide an alarm signal to indicate the status of the system.

Regarding claims 3 and 14, Alexander further teaches that the optical signals comprise different wavelengths of optical energy (fig. 2, λ_1 - λ_n).

Regarding claims 4 and 15, Alexander teaches diverting a portion of optical energy (fig. 2, tap 42) on an optical medium to obtain the optical signals.

Regarding claims 5 and 16, Alexander further teaches using a power splitter (optical tap) (fig. 2, tap 42) to divert a portion of the signal power from an incident signal.

Regarding claims 7 and 18, Alexander further teaches successively direct other ones of the optical signal through the wavelength select switch to the power meter and measuring in the other optical signals using the power meter (column 4, lines 22-29).

Regarding claim 9, Alexander further teaches to display an indication of the power in the optical signal (fig. 3).

Regarding claim 10, Alexander further teaches to determine if the power in the optical signal has crossed a predetermined threshold and trigger an alarm (fig. 2, local alarm 59) if the power in the optical signal has crossed the predetermined threshold.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. (U.S. Patent US 5,986,782) in view of Sugaya (U.S. Patent US 6,873,795 B1).

Regarding claim 11, Alexander differs from the claimed invention in that Alexander does not specifically teach controlling an optical amplifier in accordance with the power of the optical signal to regulate optical power of the optical signals on the transmission medium. However, Alexander further teaches that the system comprises optical amplifiers (fig. 1, AMP 40), and it is well known in the art to regulate an optical amplifier using signals tapped off at the output of the optical amplifier. For example, Sugaya discloses to regulate an optical amplifier by the signals tapped near the output of the amplifier (figs. 9, 11, and 18). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the amplifier regulation circuitry taught by Sugaya into the system of Alexander in order to control the gain of the optical amplifier (fig. 1, AMP 40).

Response to Arguments

5. Applicant's arguments filed on February 13, 2006 have been fully considered but they are not persuasive.

Regarding claims 1, 11, and 12, Alexander clearly discloses a method of measuring optical signal power in an optical signal, comprising: receiving optical signals at a wavelength select switch; coupling a received optical signal through the wavelength select switch to a power meter; measuring a power level of the optical signal passed through the wavelength select switch using the power meter; passing a subset of the optical signals through the wavelength select switch at substantially the same time; measuring power in the subset of optical signals using the power meter. The Applicant argues that “the wavelength selecting device 54 outputs individual, optical signals at different wavelengths. The wavelength selecting device 54 does not output groups, or subsets, of optical signals”. However, since the claim language does not specify that the “subset of the optical signal” passed through “wavelength select switch” contains more than one individual wavelength, the prior art clearly reads the limitation in the claims because a wavelength passed through the “wavelength selecting device” in Alexander is a “subset” of the optical signal received by the “wavelength selecting device”. Furthermore, the subset can be only a individual wavelength for certain cases. For example, if the optical signals received by the “wavelength selecting device” contains two wavelengths λ_1 and λ_2 and if λ_1 is selected by the wavelength selective switch, a “subset” of the optical signals through the wavelength selective switch will be only λ_2 , which is a individual wavelength. Therefore, the combinations of cited prior arts obviously disclose all of the claimed limitations in the claims and the rejections to claims 1, 3-5, 7, 10-12, and 14-18 still stand.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw
11/17/2005


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